

**WHAT IS CLAIMED IS**

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1. A method of providing a multicast service from an information delivery apparatus to wireless terminals, comprising the steps of:

transmitting, from the information

10 delivery apparatus, a plurality of sets of multicast  
information, said sets being identical to each other  
as to contents thereof but differing in transmission  
conditions; and

receiving, at any given one of the

15 wireless terminals, one of the sets of multicast  
information being transmitted under one of the  
differing transmission conditions.

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2. The method as claimed in claim 1, wherein the differing transmission conditions include differing transmission rates at which the multicast information is transmitted.

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3. The method as claimed in claim 2, wherein communication between the information delivery apparatus and the wireless terminal is based on code division multiple access, and the

differing transmission rates differ in a number of spreading codes used in the transmission of multicast information.

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4. The method as claimed in claim 2,  
wherein communication between the information  
10 delivery apparatus and the wireless terminal is  
based on time division multiple access, and the  
differing transmission rates differ in a number of  
timeslots used in the transmission of multicast  
information.

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5. The method as claimed in claim 2,  
20 wherein the differing transmission rates differ in a  
number of modulation levels used for modulating the  
multicast information.

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6. The method as claimed in claim 2,  
wherein the differing transmission rates differ in a  
transmission bit rate of the multicast information.

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7. The method as claimed in claim 1,  
wherein communication between the information  
delivery apparatus and the wireless terminal is  
based on code division multiple access, and the  
5 differing transmission conditions include differing  
processing gains of spreading the multicast  
information.

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8. The method as claimed in claim 1,  
wherein the differing transmission conditions  
include differing positions of timeslots used in the  
15 transmission of multicast information.

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9. The method as claimed in claim 1,  
further comprising the steps of:

measuring reception quality at each of the  
wireless terminals, and notifying the information  
delivery apparatus of measured results of the  
25 reception quality; and

determining, at the information delivery  
apparatus, the differing transmission conditions  
based on the measured results of the reception  
quality, the differing transmission conditions being  
30 used to transmit the plurality of sets of multicast  
information.

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10. The method as claimed in claim 9,  
further comprising a step of having the information  
delivery apparatus notify the wireless terminals of  
the differing transmission conditions, wherein said  
5 step of receiving receives the one of the sets of  
multicast information by using the one of the  
differing transmission conditions that is notified  
by the information delivery apparatus.

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11. The method as claimed in claim 1,  
further comprising the steps of:  
15 transmitting, from the information  
delivery apparatus to the wireless terminals, the  
differing transmission conditions used to transmit  
the plurality of sets of multicast information; and  
measuring reception quality at each of the  
20 wireless terminals, and selecting a transmission  
condition from the reported differing transmission  
conditions based on the measured reception quality,  
the selected transmission condition being used for  
receiving one of the sets of multicast information.

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12. The method as claimed in claim 2,  
30 further comprising a step of decreasing a size of  
the multicast information to be transmitted as the  
differing transmission rates decrease.

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13. The method as claimed in claim 12,  
wherein said step of decreasing adjusts a  
compression rate of the multicast information to be  
transmitted so as to decrease the size of the  
5 multicast information.

10 14. The method as claimed in claim 2,  
further comprising the steps of:  
storing the multicast information in a  
buffer at the information delivery apparatus as the  
multicast information is received from a network;  
15 and  
assigning channels to the respective sets  
of the multicast information as the respective sets  
are read from the buffer at rates of reading  
corresponding to the differing transmission rates.

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15. The method as claimed in claim 14,  
25 further comprising a step of adjusting the differing  
transmission rates based on delays of the reading of  
the multicast information from the buffer.

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16. An information delivery apparatus for  
delivering multicast information to wireless

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terminals through wireless routes, comprising:

a multicast information storage unit which stores the multicast information to be transmitted;

an information delivery control unit which  
5 transmits a plurality of sets of the multicast information, which are identical to each other as to contents thereof but differ in transmission conditions.

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17. The apparatus as claimed in claim 16,  
wherein the differing transmission conditions  
15 include differing transmission rates at which the multicast information is transmitted.

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18. The apparatus as claimed in claim 17,  
wherein communication between said information  
delivery apparatus and the wireless terminal is  
based on code division multiple access, and the  
25 differing transmission rates differ in a number of spreading codes used in the transmission of multicast information.

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19. The apparatus as claimed in claim 17,  
wherein communication between the information

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delivery apparatus and the wireless terminal is based on time division multiple access, and the differing transmission rates differ in a number of timeslots used in the transmission of multicast  
5 information.

10                   20. The apparatus as claimed in claim 17, wherein the differing transmission rates differ in a number of modulation levels used for modulating the multicast information.

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20                   21. The apparatus as claimed in claim 17, wherein the differing transmission rates differ in a transmission bit rate of the multicast information.

25                   22. The apparatus as claimed in claim 16, wherein communication between said information delivery apparatus and the wireless terminal is based on code division multiple access, and the differing transmission conditions include differing processing gains of spreading the multicast  
30 information.

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23. The apparatus as claimed in claim 16,  
wherein the differing transmission conditions  
include differing positions of timeslots used in the  
transmission of multicast information.

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24. The apparatus as claimed in claim 16,  
10 wherein said information delivery control unit  
determines the differing transmission conditions  
based on reception qualities of the wireless  
terminals reported from the wireless terminals, the  
differing transmission conditions being used to  
15 transmit the plurality of sets of multicast  
information.

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25. The apparatus as claimed in claim 24,  
wherein said information delivery control unit  
notifies the wireless terminals of the determined  
differing transmission conditions.

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26. The apparatus as claimed in claim 16,  
30 wherein said information delivery control unit  
notifies the wireless terminals of the differing  
transmission conditions used to transmit the  
plurality of sets of multicast information.



27. The apparatus as claimed in claim 17  
wherein said information delivery control unit  
decreases a size of the multicast information to be  
transmitted as the differing transmission rates  
5 decrease.

10 28. The apparatus as claimed in claim 27  
wherein said information delivery control unit  
adjusts a compression rate of the multicast  
information to be transmitted so as to decrease the  
size of the multicast information.

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29. The apparatus as claimed in claim 17,  
20 wherein said information delivery control unit  
assigns channels to the respective sets of the  
multicast information as the respective sets are  
read from said multicast information storage unit at  
rates of reading corresponding to the differing  
25 transmission rates.

30 30. The apparatus as claimed in claim 29,  
wherein said information delivery control unit  
adjusts the differing transmission rates based on  
delays of the reading of the multicast information

from said multicast information storage unit.

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31. A wireless terminal for receiving  
multicast information from an information delivery  
apparatus through wireless routes, comprising a  
control unit which measures reception quality of  
10 signals received from the information delivery  
apparatus, and receives one of sets of the multicast  
information sent from the information delivery  
apparatus by using transmission conditions selected  
based on the measured reception quality, wherein the  
15 sets of multicast information are identical to each  
other but differ in transmission conditions.

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32. The wireless terminal, wherein said  
control unit notifies the information delivery  
apparatus of the measured reception quality, and is  
notified by the information delivery apparatus of  
25 the transmission conditions that are to be used for  
receiving the one of the sets of the multicast  
information sent from the information delivery  
apparatus.